

FraserPapers

01/30/05

To: Andrew C. Fisk MEDEP

From: David L. Bishop Fraser Papers Inc.

Fraser Papers Comments on the Maine DEP TMDL for the Androscoggin

In general the TMDL represents a significant step forward in quantifying the issues related to water quality on the Androscoggin River. Fraser does however feel there remains uncertainty that needs to be addressed over the upcoming summer sampling seasons to better determine the impacts of the operations, municipalities and non-point sources on the river below the Fraser mill to the ocean. Fraser's comments and concerns are described below.

Allocation

- Initial allocations of pollutants for each of the point sources should be established in the TMDL, these allocations should be established in a phased manner over a period of ten years.
- These allocations should be based on the impact on the river and Gulf Island Pond of all the operations, municipalities and non-point sources on the non-compliant portions of the river. The TMDL must have provisions to revise the allocations throughout the phases of the TMDL implementation, based on better data and more accurate modeling as this information becomes available.
- Allocation of orthophosphate loadings from each mill and the effect of the actual impoundment must be carefully based on impact at Gulf Island Pond in order to eliminate the algae bloom problems. The data with respect to phosphorous in the river and the uptake rates throughout the watershed is very limited. Great care must be taken to avoid having sources spend considerable funds and effort to reduce the discharge of orthophosphates if that reduction cannot be shown to have a beneficial effect on the algae problem at the pond. There is an obvious need to gather more data to verify the findings of the model.

Time line

- The implementation timeline should reflect that the TMDL would likely result in the lowest total P limits of any pulp and paper mills in the nation. In order to ensure that these limits are justified they should be established

in a phased manner that allows sufficient time to investigate the impacts of the phased changes and adjust limits accordingly.

- There should be consistency in the watershed. The timeline to bring Gulf Island Pond to a water quality level appropriate for recreation in and on the water should not be different than the timeline for making the river below Lewiston-Auburn appropriate for recreation.
- The TMDL should not specify the oxygen injection rates and locations of oxygen diffusers since the WASP model does not model transport. This should be done using more current modeling, the type of three dimensional hydrological modeling carried by Wright Pierce in the assessments of the present diffuser should be a much more accurate tool in determining the requirements and best application of additional oxygenation.
- The time line for compliance with the BOD and solids should allow sufficient time for the operation to fully investigate non-end of pipeline solutions. Internal recycle and water system close up will result in better overall environmental performance. Internal recycle does not treat the problem but eliminates it, by reducing raw material waste, water and energy usage. This approach not only results in a much broader environmental improvement but also makes the operation more economically viable. This approach must be a well-planned phased approach to properly evaluate the effects on the mill process and products as each change is implemented.

Model Conservative Assumptions

- The model's multiple layers of conservative assumptions result in a margin of safety that is undefined and likely overly conservative. This is a concern to Fraser with respect to the impact of our discharges to the Class B water quality standard at the Maine- New Hampshire border. As demonstrated in figure 11 in the TMDL, the effect of the mill discharge as modeled only results in a slight incursion into the minimum daily DO limit of 7 ppm. All testing at this point to date has not registered any values below the standard. Fraser feels that the conservative nature of the model in all likelihood significantly overstates the mill impact on D.O. at that point on the river.
- In addition, Mr. Mitnik did not include the 2002 data, while the Fraser Mills were not operating, which shows greater non-compliance at Gulf Island Pond than when the mills were operating at full capacity. Fraser feels this data re-enforces the argument that all allocations be based on impact and

that additional controls on an operation distant from Gulf Island pond does little to improve water quality in the pond.

- The model relies on an implicit margin of safety resulting from several assumptions made in the modeling process. All point sources are assumed to discharge at their maximum allocated waste load simultaneously during a 10-year low flow event. The report acknowledges that "the probability of this occurring would be low" (page 3). These assumptions compound to create an implicit margin of safety that is undefined, is likely overly conservative, and that may largely preclude accurate model predictions.
- Regarding the margin of safety, the draft Guidance for Water Quality Based Decisions: the TMDL process (USEPA 1999) states that among the factors that should be considered in evaluating and deriving an appropriate MOS is expressing the results of a TMDL analysis in terms of confidence intervals or ranges. These confidence intervals are not identified in the draft Androscoggin TMDL report. Without a credible effort to establish confidence limits, there are few constraints on the reasonableness of the MOS. An additional factor to be considered according to this draft guidance is the "implications of the MOS on the overall load reductions identified in terms of reduction feasibility and implementation time frames". This information is not provided in the draft TMDL and is warranted given the magnitude of the environmental decision and the potential implications of this TMDL.

Other

- The TMDL should specify that mills should be given the opportunity to either choose to adopt a weekly BOD limit or statistically equivalent monthly/daily limits. Note that the precedent in the State of New Hampshire for mills (and possible other industrial sources) is absent for weekly BOD limits.
- It is not appropriate to develop a chlorophyll-a threshold for an algae bloom based upon a single event. There is little basis for establishing 10 ppb as the threshold for algae blooms in the TMDL. Page 5 of the report states, "[t]here does not appear to be a good relationship between algae blooms and chlorophyll-a at any given location". However, the report goes on to suggest that using "pond averaged chlorophyll-a", "a good relationship is apparent in the chlorophyll-a data and observed blooms." This is based on the observation of a pond average chlorophyll-a value of 10 ppb occurring simultaneously with a bloom on August 4. This single observation of paired bloom-chlorophyll-a data is not sufficient to base a TMDL on. The report acknowledges the need for additional data to better

link phosphorus and chlorophyll-a levels to algae blooms. It is therefore premature to use a value of 10 ppb to establish definitive phosphorus TMDL for this system.

- The Livermore Falls and the Dead River issues were brought into the TMDL with no prior consultation and with no evaluation of the data used. Fraser feels this should be treated as a separate issue and not be included in the present discussion until the data is properly scrutinized and evaluated.

Fraser Papers Inc.

A handwritten signature in black ink, appearing to read "D. Bishop", written in a cursive style.

David L. Bishop

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